

REMARKS/ARGUMENTS

35 U.S.C. 101 based rejections

Applicants have amended claims 21, 23-25, 26-30, such that amended claims 21, 23-25, 27-30 include a computer readable storage medium. Applicants submit that amended claims 21, 23-25, 27-30 overcome the Examiner 35 U.S.C. 101 based rejections. Claims 22 and 26 have been canceled.

35 U.S.C. 102 and 103 based rejections

The Examiner has rejected claims 1, 2, 11, 12, 21 and 22 under 35 U.S.C. 102(b) as being anticipated by Bhaskaran (6,266,335). Claims 3, 13, and 23 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Bhaskaran in view of Allen (7,003,693). Claims 5-10, 15-20, and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kandasamy (5,513,314) in view of Bhaskaran. Applicants have canceled claims 2, 6, 12, 16, 22, 26 and traverse the rejection of claims 1, 3-5, 7-11, 13-15, 17-21, 23-25, 27-30.

Amended independent claims 1, 11, 21

Amended independent claims 1, 11, 21 require
receiving an indication of a failure of a primary storage subsystem at a switch, wherein the switch couples a host to the primary storage subsystem and a secondary storage subsystem;
and

subsequently, directing a command from the host received at the switch to the secondary storage subsystem for completion by changing a source volume and a target volume in the command to correspond to volumes in the secondary storage subsystem, wherein the source volume and the target volume are for I/O operations, and wherein the changing is performed by a switching application in the switch.

The added new requirements in claims 1, 11, 21 are the same as the requirements of original claims 2, 12, and 22 respectively. Therefore, amended independent claims 1, 11, 21 have the same requirements as original dependent claims 2, 12, 22 of the original Application. The

Examiner has rejected original claims 2, 12, 22 under 35 U.S.C. 102(b) as being anticipated by Bhaskaran. Applicants traverse the rejected of the claims.

In page 3 of the Office Action, the Examiner has mentioned that col. 8, lines 46-50 of the cited Bhaskaran teach or disclose the claim requirement of changing a source volume and a target volume in the command to correspond to volumes in the secondary storage subsystem, wherein the source volume and the target volume are for I/O operations, and wherein the changing is performed by a switching application in the switch.

Col. 8, lines 46-50 of the cited Bhaskaran is as follows: "If the primary IP server fails, the failure is automatically detected by the network flow switch and the failed IP server's status is converted to "secondary-failed." One of the available IP servers in state "secondary-operational" is then converted to state "primary"." The Examiner has failed to indicate where the cited Bhaskaran teaches or discloses the following additional claim requirements:

- (i) a source volume and a target volume in a command received at the switch from a host;
- (ii) changing, by the switching application in the switch, the source volume and a target volume in the command to correspond to volumes in the secondary storage subsystem.

For the above reasons claims 1, 11, 21 are patentable over the cited art.

Amended Independent Claims 5, 15, 25

Amended independent claims 5, 15, 25 comprise:

receiving an I/O command at a switch from a host;

if the I/O command is a write I/O, then writing data via the switch to a primary storage subsystem and a secondary storage subsystem, wherein the switch couples the host to the primary storage subsystem and the secondary storage subsystem, and wherein the data written to the primary storage subsystem and the data written to the secondary storage subsystem are the same; and

if the I/O command is a read I/O, then reading the data exclusively from the primary storage subsystem.

The added new requirements in claims 5, 15, 25 are as follows: "if the I/O command is a read I/O, then reading the data exclusively from the primary storage subsystem". Attention is drawn to the Examiner that dependent claims 6, 16, 26 that have now been canceled included the requirements "if the I/O command is a read I/O, then reading the data exclusively from the

primary storage subsystem.” Attention is also drawn to the Examiner that the term “exclusively” has been added in the newly added claim requirements to independent claims 5, 15, 25.

The Examiner has rejected claims 5, 15, 25 (and 6, 16, 26) as being unpatentable over Kandasamy in view of Bhaskaran.

In page 3 of the office action (in rejecting claim 6), the Examiner has mentioned that col. 5, lines 57-63 of the cited Kandasamy discusses that if the I/O command is a read I/O, then reading the data from the primary storage subsystem. Amended claims 5, 15, 25 require that if the I/O command is a read I/O, then the data is read exclusively from the primary storage subsystem and the cited Kandasamy teaches away from these claim requirements. For example, in the cited Kandasamy the abstract mentions that the file data transferred to the client system is provided to the client system by either the first or second server system (Kandasamy: the last 4 lines of the abstract, i.e., lines 17-20 of the abstract). Therefore, in the cited Kandasamy the data can be read from either the primary storage subsystem or the secondary storage subsystem if the I/O command is a read I/O, whereas the claims require that if the I/O command is a read I/O, then reading the data exclusively from the primary storage subsystem.

For the above reasons claims 5, 15, 25 are patentable over the cited art.

Dependent claims 3-4, 7-10, 13-14, 17-20, 23-24, 27-30

Additionally, claims 3-4, 7-10, 13-14, 17-20, 23-24, 27-30 depend directly or indirectly on the pending independent claims 1, 5, 11, 15, 21, and 25. Applicants submit that these claims are patentable over the cited art because they depend from claims 1, 5, 11, 15, 21, and 25 which are patentable over the cited art for the reason discussed above, and because the combination of the limitations in the dependent claims and the base and intervening claims from which claims 3-4, 7-10, 13-14, 17-20, 23-24, 27-30 depend provide further grounds of distinction over the cited art.

Dependent Claims 3, 13, 23

The Examiner has mentioned that col. 8, lines 46-49 of the cited Bhaskaran teaches or suggests the claim requirement that the monitor application is coupled to a hardware unit coupled to the primary storage subsystem. Applicants submit that col. 8, lines 46-49 of the cited Bhaskaran discusses automated detection of failure of an IP server by a network flow switch and

the Examiner has failed to indicate where the cited Bhaskaran (or for that matter the cited Allen) teaches or suggests the claim requirement that the monitor application is coupled to a hardware unit coupled to the primary storage subsystem.

For the above reasons claims 3, 13, 23 are patentable over the cited art.

Amended Dependent claims 7, 17, 27

Applicants have amended dependent claims 7, 17, 27 to include the requirement that the switching application in the switch copies the data from the switch to the secondary storage subsystem.

The Examiner has mentioned that col. 11, lines 46-49 of the cited Kandasamy teaches or suggests the claim requirement of copying the data from the switch to the secondary storage subsystem. Applicants submit that col. 11, lines 46-49 of the cited Kandasamy discusses that servers each receive and qualify the request and corresponding entries are made in the DRC table structures, and the servers then asynchronously perform the write data requests. However, nowhere does the cited Kandasamy (or the cited Bhaskaran) teach or suggest the claim requirements of copying the data from the switch to the secondary storage subsystem is performed by the switching application in the switch.

For the above reasons claims 7, 17, 27 are patentable over the cited art.

Conclusion

For all the above reasons, Applicant submits that the pending claims are patentable over the art of record. Should any additional fees be required, please charge Deposit Account No. 09-0449.

The attorney/agent of record invites the Examiner to contact him at (310) 557-2292 if the Examiner believes such contact would advance the prosecution of the case.

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By: ___/Rabindranath Dutta/___

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